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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,770	06/21/2006	Masashi Hashimoto	03500.119746.	5898
5514	7590	12/23/2009	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 1290 Avenue of the Americas NEW YORK, NY 10104-3800			BOHATY, ANDREW K	
ART UNIT	PAPER NUMBER			
	1794			
MAIL DATE	DELIVERY MODE			
12/23/2009	PAPER			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/583,770	HASHIMOTO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Andrew K. Bohaty	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 23 October 2009.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 12-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 12-21 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2009/10/23</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|   | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

1. This Office action is in response to the amendment filed August 23, 2009 which amends the abstract, cancels claims 1-11, and adds claims 12-21. Claims 12-21 are pending. Claim 12 corresponds to former claim 1, while claims 13-21 correspond to former claims 3-11.

### ***Response to Amendment***

2. The objection to the abstract of the disclosure as set forth in the Office action mailed July 23, 2009 is withdrawn due to amendment to the abstract of the disclosure.

3. The rejections of Claims 1-11 under 35 U.S.C. 112, second paragraph, as set forth in the Office action mailed July 23, 2009 are overcome due to claim amendment and claim cancellation.

4. The rejection of claims 1-7, and 9-11 35 U.S.C. 102(b) as being anticipated by Kamatani et al. (US 2003/0189216) as set forth in the Office action mailed July 23, 2009 are overcome due to claim amendment and claim cancellation.

5. The rejection of claims 1-5 under 35 U.S.C. 102(b) as being anticipated by Suzuki et al. (JP 2004-107326), where Suzuki et al. (US 2005/0236974) is a patent family member and used as the English translated version, as set forth in the Office action mailed July 23, 2009 are overcome due to claim amendment and claim cancellation.

6. The rejection of claim 8 under 35 U.S.C. 103(a) as being unpatentable over Kamatani et al. (US 2003/0189216) in view of Fukuda et al. (US 2004/0110031) as set forth in the Office action mailed July 23, 2009 are overcome due to claim amendment.

7. The rejection of claims 6, 7, and 9-11 under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (JP 2004-107326), where Suzuki et al. (US 2005/0236974) is a patent family member and used as the English translated version, in view of Kamatani et al. (US 2003/0189216) as set forth in the Office action mailed July 23, 2009 are overcome due to claim amendment and claim cancellation.

8. The rejection of claim 8 under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (JP 2004-107326), where Suzuki et al. (US 2005/0236974) is a patent family member and used as the English translated version, in view of Kamatani et al. (US 2003/0189216) and Fukuda et al. (US 2004/0110031) as set forth in the Office action mailed July 23, 2009 are overcome due to claim amendment and claim cancellation.

9. The claims 1-10 on the grounds of nonstatutory obviousness-type double patentable over claims 1-10 of copending Application No. 11/686,002 is overcome due to claim amendment and claim cancellation.

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

***Information Disclosure Statement***

11. The information disclosure statement filed August 23, 2009 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

12.

***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

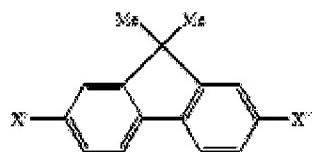
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 12-20 are rejected under 35 U.S.C. 102(a) and under 35 U.S.C. 102(e) as being anticipated by Robello et al. (US 2005/0123787) (hereafter "Robello").

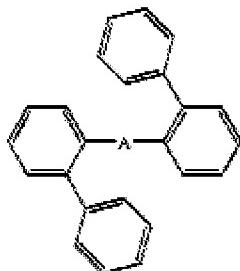
15. Regarding claims 12 and 13, Robello discloses the following formula, X'-A-X" (formula (1), paragraphs [0011]-[0012]), where A and X' and X" have a limited number of choices (paragraphs [0018]-[0020]). Although Robello does not disclose any specific compounds that read on the limitations of claims 12 and 13, given the few number of groups that correspond to A, 11, and X' and X", 4, it would be clearly

Art Unit: 1794

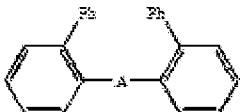


enviseage to select

as the A component and select



or



as the X' and X" components to produce

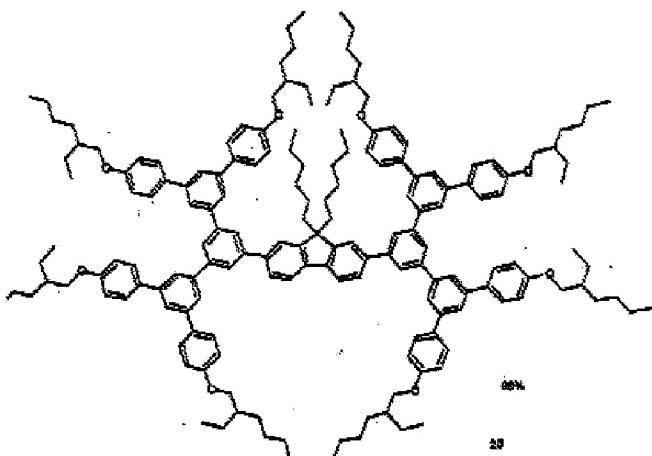
materials that read the limitations of applicants' claims 12 and 13.

16. Regarding claims 14-20, Robello discloses an electroluminescent device comprising an anode and a cathode where there is a light emitting layer between the anode and cathode (paragraph [0011]). Further the light emitting layer comprises a host material and a phosphorescent dopant and the host material has a compound of formula (1) from paragraph 15 above (paragraph [0011]). Robello discloses the phosphorescent dopant can be an iridium coordinated complex (paragraph [0027]) and the light emitting layer can comprise plural kinds of phosphorescent materials (paragraph [0043]).

17. Claims 12-15 rejected under 35 U.S.C. 102(b) as being anticipated by Burn et al. (US 2004/0169463) (hereafter "Burn").

Art Unit: 1794

18. Regarding claims 12 and 13, Burn discloses a compound with the following



structure,

(compound 20 Figure 6).

Which reads on the limitations of applicants' formula (1), where y and z are 0, x is 1, R<sub>3</sub> and R<sub>8</sub> are hydrogen, R<sub>1</sub>, R<sub>5</sub>, R<sub>6</sub>, and R<sub>10</sub> are hydrogen and R<sub>2</sub>, R<sub>4</sub>, R<sub>7</sub>, and R<sub>9</sub> are substituted aryl groups; And R<sub>11</sub> and R<sub>12</sub> are linear alkyl groups. Burn's compound 22 in Figure 6 also reads on the limitations of formula (1).

19. Regarding claims 14 and 15, Burn discloses the above fluorene compound can be used in the light emitting layer of a light emitting diode and the layer is found between a cathode and an anode (paragraph [0027]).

### ***Claim Rejections - 35 USC § 103***

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1794

21. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

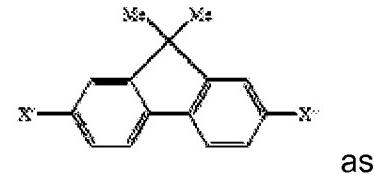
obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

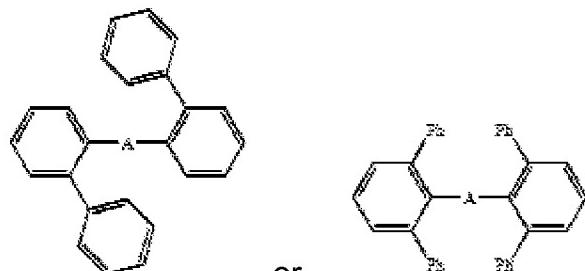
22. Claims 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Robello et al. (US 2005/0123787) (hereafter "Robello").

23. Regarding claims 12 and 13, Robello teaches the following formula, X'-A-X"  
(formula (1), paragraphs [0011]-[0012]), where A and X' and X" have a limited number



of choices (paragraphs [0018]-[0020]), which includes select



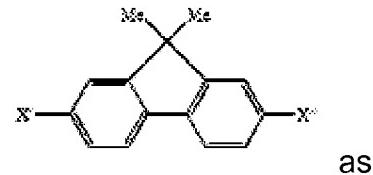
components. Robello teaches the host materials having that fall under the limitations of formula (1) will provide improved efficiency, stability, and spectral characteristics of electroluminescent devices (paragraph [0010]).

24. Robello does not specifically teach any compounds that read on the limitations of applicants' formula (1).

Art Unit: 1794

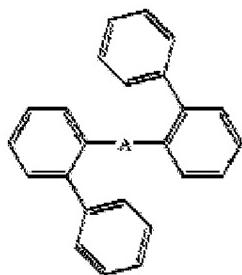
25. Given the teachings of Robello, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to select

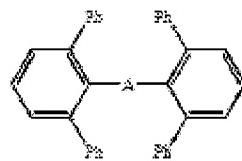


as

the A component and select



or



as the X' and

X" components to produce materials that read the limitations of applicants' claims 12 and 13. Robello teaches a limited number of groups that corresponds to A and X' and X" in Robello's formula (1); therefore, it would have been obvious to select the above components. The motivation would have been provide a host material that can be used with phosphorescent materials to provide improved efficiency, stability, and spectral characteristics of electroluminescent devices.

26. Regarding claims 14-20, Robello teaches an electroluminescent device comprising an anode and a cathode where there is a light emitting layer between the anode and cathode (paragraph [0011]). Further the light emitting layer comprises a host material and a phosphorescent dopant and the host material has a compound of formula (1) from paragraph 15 above (paragraph [0011]). Robello teaches the phosphorescent dopant can be an iridium coordinated complex (paragraph [0027]) and the light emitting layer can comprise plural kinds of phosphorescent materials (paragraph [0043]).

27. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robello et al. (US 2005/0123787) (hereafter "Robello") as applied to claims 12-20 above, and further in view of Kamatani et al. (US 2003/0189216) (hereafter "Kamatani").

28. Regarding claim 21, Robello does not teach the use of the electroluminescent device in a display apparatus.

29. Kamatani teaches that a display apparatus comprising an organic electroluminescent device (paragraphs [0108]-[0121]) to provide a lightweight flat-panel display with energy saving performance and high visibility (paragraph [0113]).

30. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the electroluminescent device, of Kamatani, to be contained in a display apparatus. The motivation would be to provide a lightweight flat-panel display with energy saving performance and high visibility.

31. Claims 16, 17, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burn et al. (US 2004/0169463) (hereafter "Burn") as applied to claims 12-15 above, and further in view of Kamatani et al. (US 2003/0189216) (hereafter "Kamatani").

32. Regarding claims 16, 17, 19, and 20, Burn does not teach an organic electroluminescent device wherein the light-emitting layer comprises at least two compounds including a host compound and a guest compound; wherein the guest compound is a phosphorescent material; wherein the phosphorescent material

Art Unit: 1794

comprises a metal coordination compound, and more specifically an iridium coordination compound.

33. Kamatani teaches an electroluminescent device wherein the light-emitting layer comprises at least two compounds including a host compound a compound (paragraphs [0062]-[0067] and [0070], where EH-B is the host and EG-A is the guest) and Kamatani further teaches the guest compound (EG-A) as a phosphorescent material (paragraph [0057] and [0058]), which is a metal, iridium, coordination compound to provide an electroluminescent device that has a high light emitting efficiency and a long light emission lifetime (paragraph [0030]).

34. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the light emitting layer, of Burn, to comprises of at least two compounds, including a host compound and a guest compound; wherein the guest compound is a phosphorescent material; wherein the phosphorescent material comprises a metal coordination compound, and more specifically an iridium coordination compound and the host material is the fluorene compound of Burn. The motivation would be to provide an electroluminescent device that has a high light emitting efficiency and a long light emission lifetime.

35. Regarding claim 21, Burn does not teach the use of the electroluminescent device in a display apparatus.

36. Kamatani teaches that a display apparatus comprising an organic electroluminescent device (paragraphs [0108]-[0121]) to provide a lightweight flat-panel display with energy saving performance and high visibility (paragraph [0113]).

37. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the electroluminescent device, of Burn, to be contained in a display apparatus. The motivation would be to provide a lightweight flat-panel display with energy saving performance and high visibility.

38. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burn et al. (US 2004/0169463) (hereafter “Burn”) in view of Kamatani et al. (US 2003/0189216) (hereafter “Kamatani”) as applied to claims 12-17 and 19-21 above, and further in view of Fukuda et al. (US 2004/0110031) (hereafter “Fukuda”).

39. Regarding claim 18, Burn in view of Kamatani does not teach wherein the phosphorescent material is of plural kinds.

40. Fukuda teaches the light emitting layer of an electroluminescent device can contain a host and a dopant (guest compound) (paragraph [0101]) and the guest is a phosphorescent material (paragraphs [0110] and [0111]). Fukuda further teaches that the phosphorescent material can be a plurality of dopant compounds (paragraphs [0115]) to provide an electroluminescent device that can emit light in any color, including white light (paragraph [0115]).

41. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the guest material, of Burn in view of Kamatani, wherein the guest compound is a phosphorescent material in plural kinds. The motivation would be to provide an electroluminescent device that can emit light in any color, including white light.

***Conclusion***

42. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

43. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

44. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew K. Bohaty whose telephone number is (571)270-1148. The examiner can normally be reached on Monday through Thursday 7:30 am to 5:00 pm EST and every other Friday from 7:30 am to 4 pm EST.

45. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached on (571)272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

46. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. K. B./  
Andrew K. Bohaty  
Patent Examiner, Art Unit 1794

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